

ABSTRACT

[0040] A monomer stream containing propylene is supplied to a polymerization reactor which is operated under temperature and pressure conditions effective for the production of a stereoregular propylene polymer fluff. A titanium-based supported Ziegler-Natta catalyst having a titanium content of at least 1.7 wt.% and incorporating an internal electron donor is incorporated into the monomer stream. A trialkylaluminum co-catalyst is supplied to the monomer stream in an amount to provide an aluminum/titanium molar ratio within the range of 50-500. A silicon-based external electron donor is also supplied to the monomer stream in an amount to provide an aluminum/silicon molar ratio within the range of 10-500. Polymer fluff recovered from the polymerization reactor has a melt flow rate of at least 200 grams/10 minutes, and a xylene soluble content of no more than 4 wt.%.

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